

AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions of claims in the application.

Listing of Claims:

1-44 (Cancelled)

45. (Previously Presented) An immunological vaccine delivery composition comprising:
a calcium phosphate and an immunogen which elicits a host immune response that
protects a host against a pathogen;

wherein said composition is formulated as a hardenable, injectable paste having a solids
content of greater than or equal to 40 wt%.

46. (Previously Presented) The composition of claim 45, wherein said immunogen is
selected from the group consisting of

a bacteria, or fragment thereof, a virus, or fragment thereof, a nucleic acid molecule, a
protein, a hapten, a tolergen, and an allergen.

47-48 (Cancelled)

49. (Previously Presented) The composition of claim 45 further comprising an adjuvant.

50. (Previously Presented) The composition of claim 49, wherein said adjuvant is
selected from the group consisting of muramyl dipeptide, aluminum hydroxide, aluminum

phosphate, hydroxyapatite, Incomplete Freund's adjuvant, and Complete Freund's adjuvant.

51. (Previously Presented) The composition of claim 49, wherein said adjuvant is selected so as to elicit an immune response from targeted cells or cell types.

52. (Previously Presented) The composition of claim 49, wherein said adjuvant is selected so as to elicit an immune response from cells of the same type.

53. (Previously Presented) The composition of claim 49, wherein said adjuvant is selected so as to elicit an immune response from cells of different types.

54. (Previously Presented) The composition of claim 49, further comprising an endogenous adjuvanticity enhancing means.

55. (Cancelled)

56. (Previously Presented) The composition of claim 45 further comprising a cytokine.

57. (Previously Presented) The composition of claim 56, wherein said cytokine is selected from the group consisting of IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-9, IL-11, IL-13, G-CSF, IL-15, GM-CSF, OSM, LIF, IFN- γ , IFN- α , IFN- β , B7.1, B7.2, TNF- α , TNF- β , LT- β , CD40 ligand, Fas ligand, CD27 ligand, CD30 ligand, 4-1BBL, IL-8, MCP-1, MIP- α , MIP- β , RANTES,

TGF- β , IL-1 α , IL-1 β , IL-1 RA, IL-10, IL-12, and MIF.

58. (Previously Presented) The composition of claim 45, wherein said calcium phosphate comprises amorphous calcium phosphate, nanocrystalline calcium phosphate, poorly crystalline calcium phosphate, dicalcium phosphate dihydrate, tricalcium phosphate, tetracalcium phosphate, monetite, monocalcium phosphate monohydrate, octacalcium phosphate, or hydroxyapatite.

59. (Previously Presented) A method for stimulating an immune response in a mammal, said method comprising:

administering to the mammal a composition comprising a calcium phosphate and an immunogen which elicits a host immune response that protects a host against a pathogen,

wherein said composition is formulated as a hardenable, injectable paste having a solids content of greater than or equal to 40 wt%.

60. (Previously Presented) A method for increasing immunogenicity of an antigen in a mammal, said method comprising:

co-administering both an immunogen which elicits a host response that protects said mammal against a pathogen and a composition comprising a calcium phosphate formulated as an injectable paste having a solids content of greater than or equal to 40 wt%.

61 (Previously Presented) The method of claim 59 or 60, wherein said immunogen is

selected from the group consisting of a bacteria, or fragment thereof, a virus, or fragment thereof, a nucleic acid molecule, a protein, a hapten, a tolergen, and an allergen.

62-63 (Cancelled)

64. (Previously Presented) The method of claim 59 or 60, wherein said composition further comprises an adjuvant.

65. (Previously Presented) The method of claim 64, wherein said adjuvant is selected from the group consisting of muramyl dipeptide, aluminum hydroxide, aluminum phosphate, hydroxyapatite, Incomplete Freund's adjuvant, and Complete Freund's adjuvant.

66. (Previously Presented) The method of claim 64, wherein said adjuvant is selected so as to elicit an immune response from targeted cells or cell types.

67. (Previously Presented) The method of claim 64, wherein said adjuvant is selected so as to elicit an immune response from cells of the same type.

68. (Previously Presented) The method of claim 64, wherein said adjuvant is selected so as to elicit an immune response from cells of different types.

69. (Previously Presented) The method of claim 64, wherein said composition further

comprises an endogenous adjuvanticity enhancing means.

70. (Previously Presented) The method of claim 59 or 61, wherein said composition further comprises a cytokine.

71. (Previously Presented) The method of claim 70, wherein said cytokine is selected from the group consisting of IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-9, IL-11, IL-13, G-CSF, IL-15, GM-CSF, OSM, LIF, IFN- γ , IFN- α , IFN- β , B7.1, B7.2, TNF- α , TNF- β , LT- β , CD40 ligand, Fas ligand, CD27 ligand, CD30 ligand, 4-1BBL, IL-8, MCP-1, MIP- α , MIP- β , RANTES, TGF- β , IL-1 α , IL-1 β , IL-1 RA, IL-10, IL-12, and MIF.

72. (Previously Presented) The method of claim 59 or 60, wherein said calcium phosphate comprises amorphous calcium phosphate, nanocrystalline calcium phosphate, poorly crystalline calcium phosphate, dicalcium phosphate dihydrate, tricalcium phosphate, tetracalcium phosphate, monetite, monocalcium phosphate monohydrate, octacalcium phosphate, or hydroxyapatite.